

Ron Kolb Comments:

At the January 17, 2001 task force meeting, Berkeley Lab announced that it will remove an aboveground, hillside stack that has been the source of tritium emissions, and replace it with a small, rooftop stack at the National Tritium Labeling Facility. Please click on the press release to read more about this.

<http://www.lbl.gov/Science-Articles/Archive/tritium-stack-removal.html>



research news

Improvements Announced At Lab's National Tritium Labeling Facility

Ron Kolb, rrkolb@lbl.gov

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BERKELEY, CA — Lawrence Berkeley National Laboratory will complete improvements in ventilation and exhaust systems at its National Tritium Labeling Facility (NTLF) this year, leading to reduced energy consumption and improved worker safety.

The new efficiencies, combined with a 10-fold decrease in tritium emissions achieved over the past 10 years, will render the present high-capacity exhaust system -- including a 28-foot-high emissions stack -- unnecessary. The stack will be removed as part of the renovation work and a new, smaller stack will be installed on the roof of the building that houses the NTLF.

Electricity saved as a result of the modifications is expected to equal the power required by about eight standard houses. Significant natural gas savings are also anticipated.

Berkeley Lab officials made the announcement at the January 17 meeting of the Environmental Sampling Project Task Force, a committee of diverse community representatives who are advising the laboratory on a proposed tritium sampling plan. Some task force and community members have recommended that the Laboratory remove the stack from the hillside adjacent to the NTLF.

"This action will update and improve air circulation systems, making an already safe facility even safer, and more energy-efficient," David McGraw, Director of the Environmental Health and Safety Division, told the task force. "As a result, the larger exhaust stack will be unnecessary, and its removal will allow us to also be responsive to citizen interests."

Air will be vented in the future through a smaller stack on the roof of the NTLF, which is about 130 feet further away from the closest off-site receptor than the existing stack.

McGraw told community members that, even though tritium emissions are already minute and far below maximum levels permitted for public safety, preliminary air dispersion modeling indicates a probable reduction in radiation doses to the maximally exposed individual resulting from the changes. And he assured them, "These improvements will not result in any increase in emissions or in facility activity."

Laboratory and independent assessments over the last five years have showed that the annual public dose from tritium emissions at the NTLF is less than one percent of the public health standard for air established by the Environmental Protection Agency

(EPA) for facilities of its type.

In 1999, the most recent year for which official numbers are available, NTLF emissions resulted in a maximum potential radiation dose to an off-site individual of less than 0.1 millirem. That is less than 1 percent of the EPA's National Emission Standards for Hazardous Air Pollutants (NESHAPS) public health limit of 10 millirems per year.

The facility renovations, which include upgrades to air circulation and supply systems, temperature and pressure controls, refrigeration, and fume hoods, are due for completion by October 1.

Berkeley Lab has been working since the mid-1970s, and especially over the last 10 years, to reduce tritium emissions even further through adjustments to hardware and processes. These improvements have included a larger silica gel tritium capture system, tritium and air recycling, prompt packaging and storing of waste, newer labeling tools and methodology, emissions control hardware, improved monitoring, and safety peer reviews. Additional modifications for further reductions are being studied.

Responding to citizen requests, the EPA has asked the Laboratory to gather additional data for reevaluation as a potential priority environmental clean-up site. The task force was set up to expedite the collection of data through an environmental sampling plan. A draft plan is being discussed by the committee and should be ready for implementation this year.

Laboratory officials believe that the data, once collected, will verify prior independent health assessments that have concluded the tritium emissions pose no danger to public or environmental health and safety. EPA officials have stated it is unlikely that Berkeley Lab will be added to the agency's National Priority List.

The National Tritium Labeling Facility was established as a National Institutes of Health resource center in 1982. Its role is to conduct research, to help biomedical researchers study cell metabolism, and to test new products that can be useful in curing disease. Facility staff and visiting researchers "label" pharmaceuticals and other materials with tritium, a radioactive form of hydrogen, in order to trace their behavior in various media. The NTLF is unique in the United States as it provides the technology to do labeling and analysis at the same location.

Berkeley Lab is a U.S. Department of Energy laboratory located in Berkeley, California. It conducts unclassified scientific research and is managed by the University of California.